

β-strand A loop AB β-strand B
 360 X D S N P R G V S A Y L S R P S P F D X L F I R K S P T I T
 (SEQ ID NO:1) 1,7 8

 loop BC β-strand C loop CD
 390 C L V V D L A P S K G T V N L T W S R X A S X X G K P V N H
 2 9 3

β-strand D loop DE β-strand E loop EF
 420 S T R K E E K Q R X N X X G T L T V T S T L P V G T R D W I
 6 10 4

β-strand F loop FG β-strand G
 450 E G E T Y Q C R V T H P H L P R A L X M R S T T K T S G P
 11 FIG.1 5 12

MaE11 Light Chain (SEQ ID NO:2)

DIVLTQSPASLAVSLGQRATISCKASQSVDDYDGD SYMNWYQQKPGQPPILLIYAASYLG
SEIPARFSGSGSGTDFTLNIHPVEEEDAATFYCQQSHEDPYTFGAGTKLEIK

MaE11 Heavy Chain (SEQ ID NO:3)

DVQLQESGPGGLVKPSQSLSLACSVTGYSITSGYSWNWIRQFPGNKLEWMGSITYDGSS
NYNPSLKNRISVTRDTSQNQFFLKLNSATAEDTATYYCARGSHYFGHWHFAVWGAGTTVT
VSSAKTTPPSVYPLAR

Mae13 Light Chain (SEQ ID NO:4)

DIVMTQSQKFMSTSVGDRVSVTCKASQNVSSNVAWYQQKPGQSPKALIYSASYRYS
PDRFTGSGSGTDFTLTISNVQSEDLAEYFCQQYYTYPLYTFGGGTKLEIKRADAAPTVSI
FPPSTR

Mae13 Heavy Chain (SEQ ID NO:5)

DVQLQESGPGGLVKPSQSLSLTCTVTGYTITSDNAWNWIRQFPGNKLEWMGYINHSGTT
SYNPSLKSRIISITRDTSKNQFFLQLNSVTTEDTATYYCAWVVAYAMDYWGQGTSTVTVSSA
KTPPSVYPLAR

Mae15 Light Chain (SEQ ID NO:6)

DIQLTQSPASLAVSLGQRATISCKASQSVDDYDGD SYMNWYQQKPGQPPKLLIYAASNLES
GIPARFSGSGSGTDFTLNIHPVEEEDAATYYCQQSNEDPFTFGAGT

Mae15 Heavy Chain (SEQ ID NO:7)

DVQHQESEPDLVKPSQSLSLTCTVTGYTITSGYNRHWIRQFPGNKLEWMGYIHYSGST
NYNPSLKRRIISITRDTSKNQFFLQLNSVTTEDTATYYCARGSIYYYGSRYRYFDVWGAGT
TVTVSSAKRHPHLSIHWPG

Humanized MaE11 Version 1 (intact IgG)

Heavy Chain (SEQ ID NO:8)

EVQLVESGGGLVQPGGSLRLSCAVSGYSITSGYSWNWIRQAPGKGLEWVASITYDGSTNY
ADSVKGRFTISRDDSKNTFYLQMNSLRAEDTAVYYCARGSHYFGHWHFAVWGQGTLVTVS
SASTKGKGPSVFPLAPSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVL
QSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKKVEPKSCDKTHTCPPCPAPEL
LGGPSVFLFPPKPKDTLMISRTPEVTCVVDVSHEDPEVKFNWYVDGVEVHNAKTKPREE
QYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTLPPS
REEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTPPVLDSDGSFFLYSKLTVDK
SRWQQGNVFSCSVMHEALHNHYTQKSLSLSPGK

Light Chain (SEQ ID NO:9)

DIQLTQSPSSLSASVGDRVTITCRASQSVDDYDGDSYMNWYQQKPGKAPKLLIYAASYLE
GVPSRFSGSGSGTDFTLTISSLQPEDFATYYCQQSHEDPYTFGQGTKVEIKRTVAAPSVF
IFPPSDEQLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQESVTEQDSKDSTYSLS
STLTLSKADYEKHKVYACEVTHQGLSSPVTKSFNRGEC

FIG.3

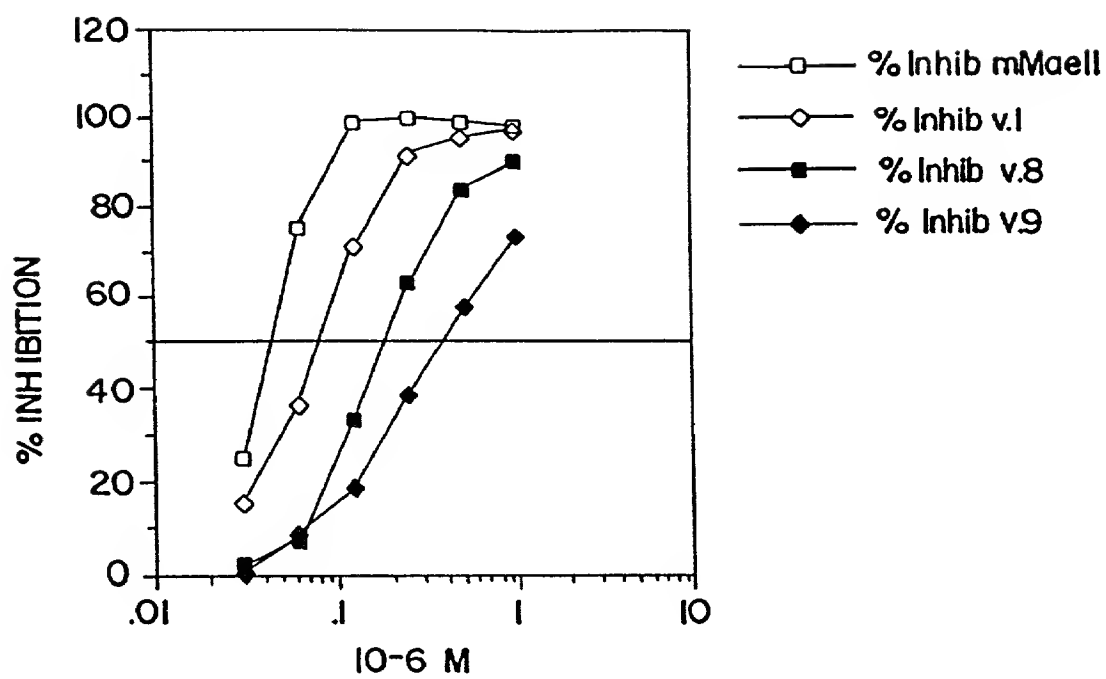


FIG.4a

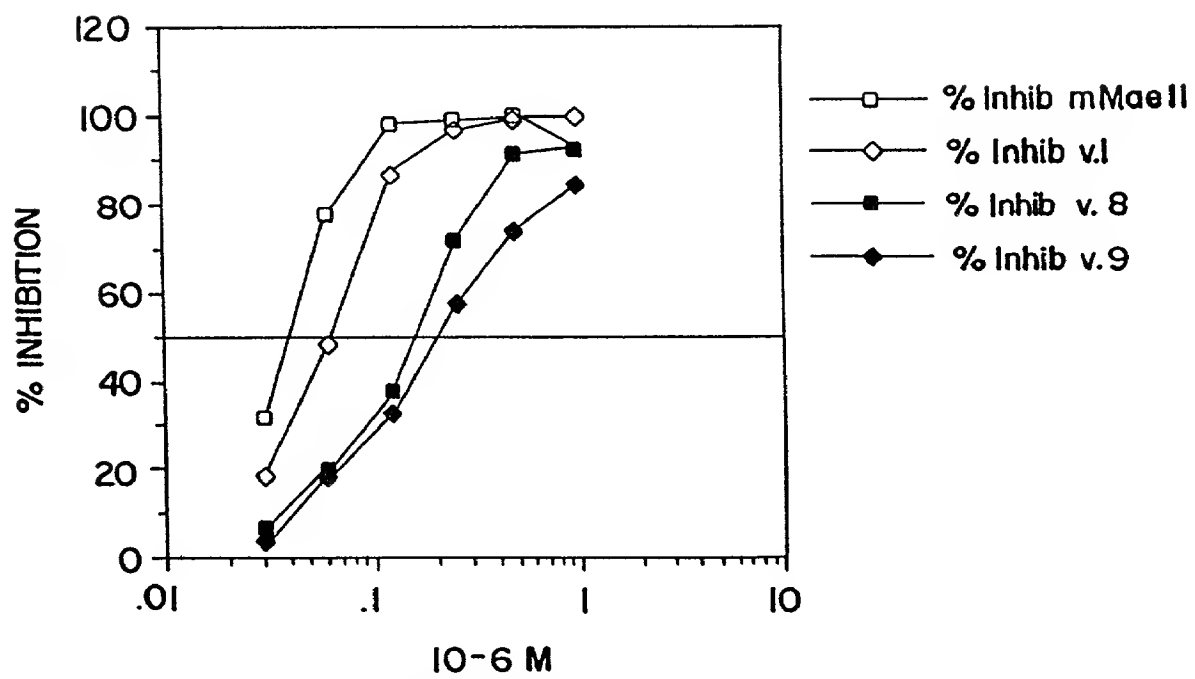


FIG.4b

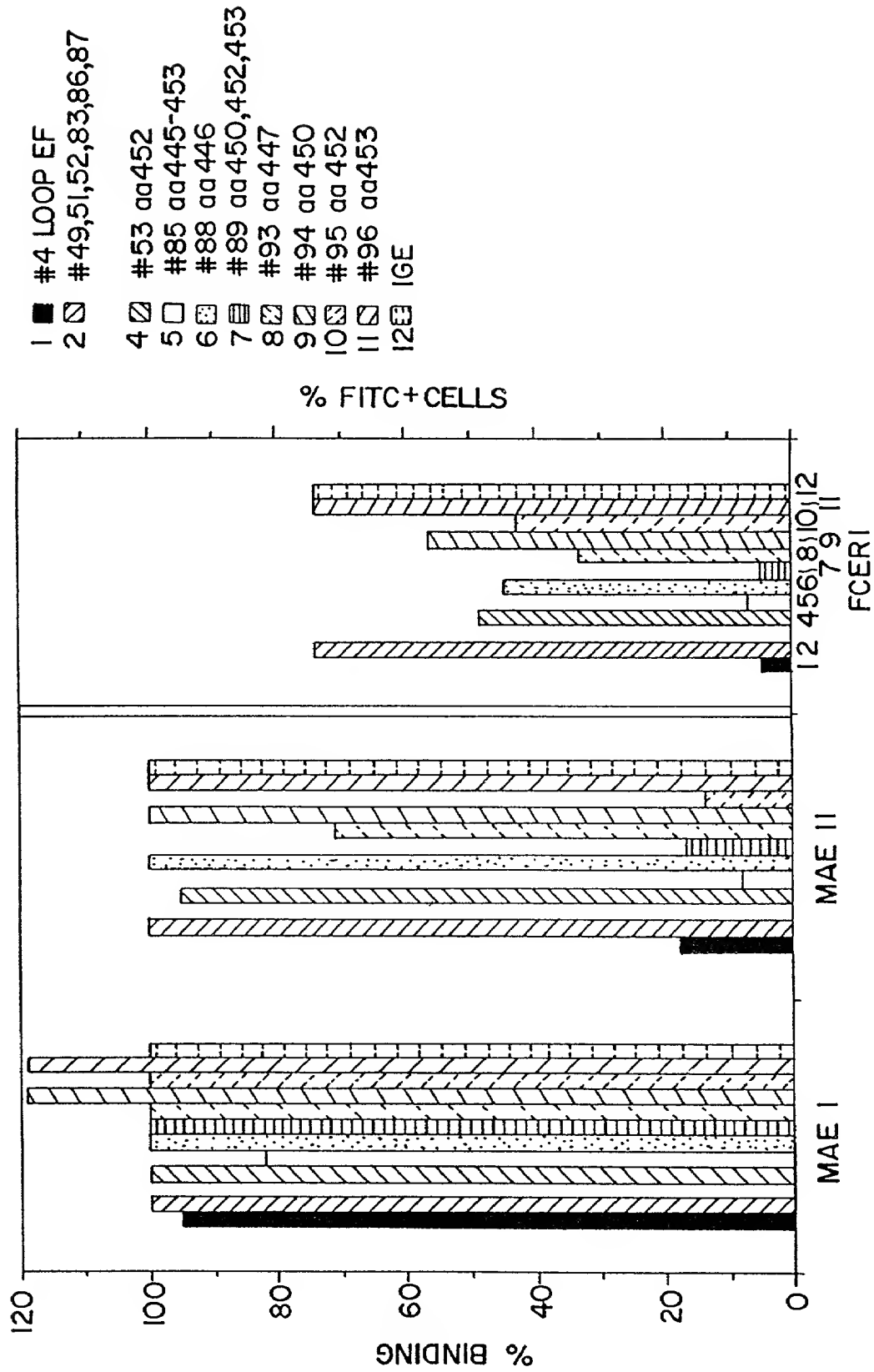


FIG.5a

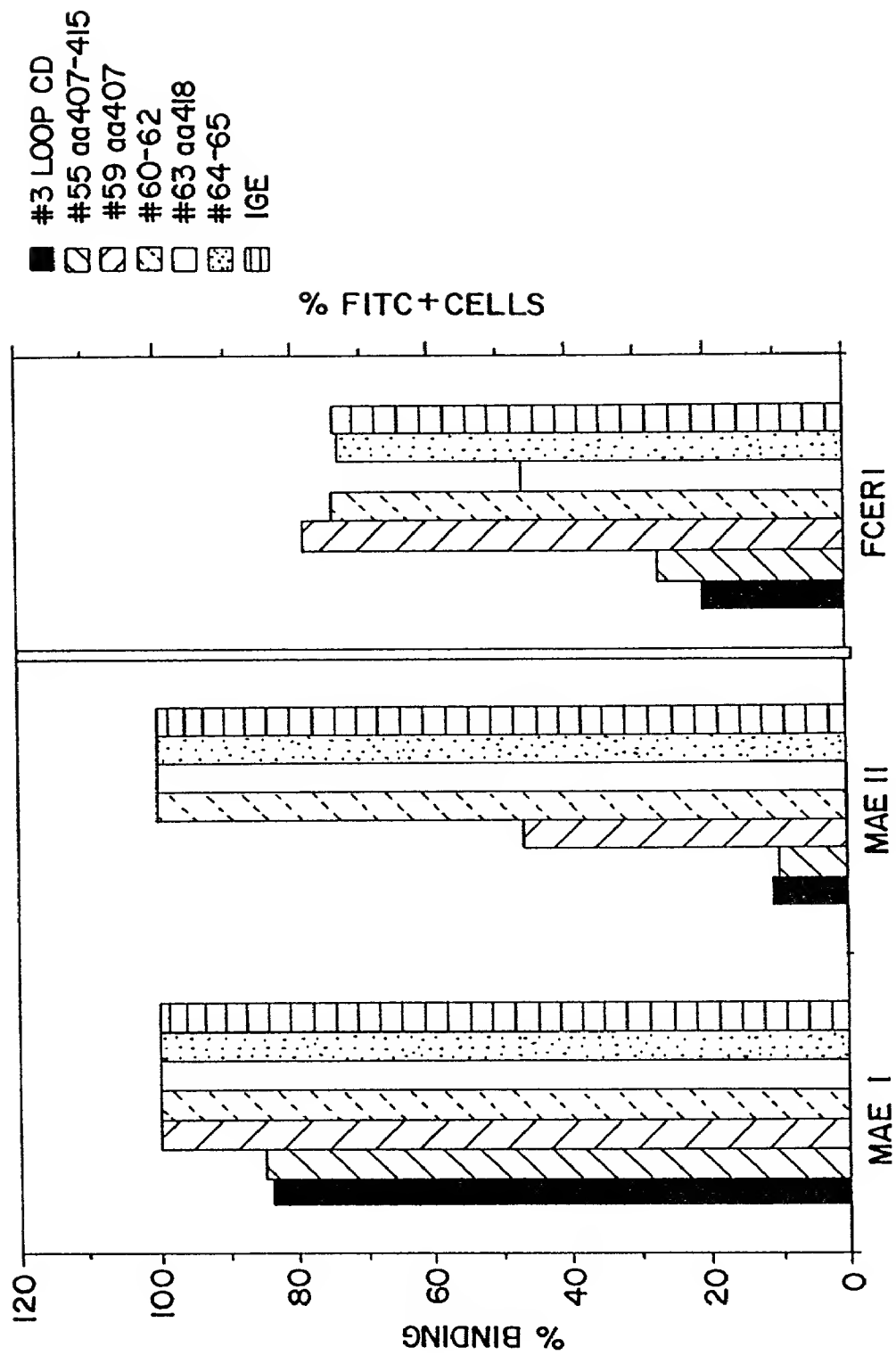


FIG.5b

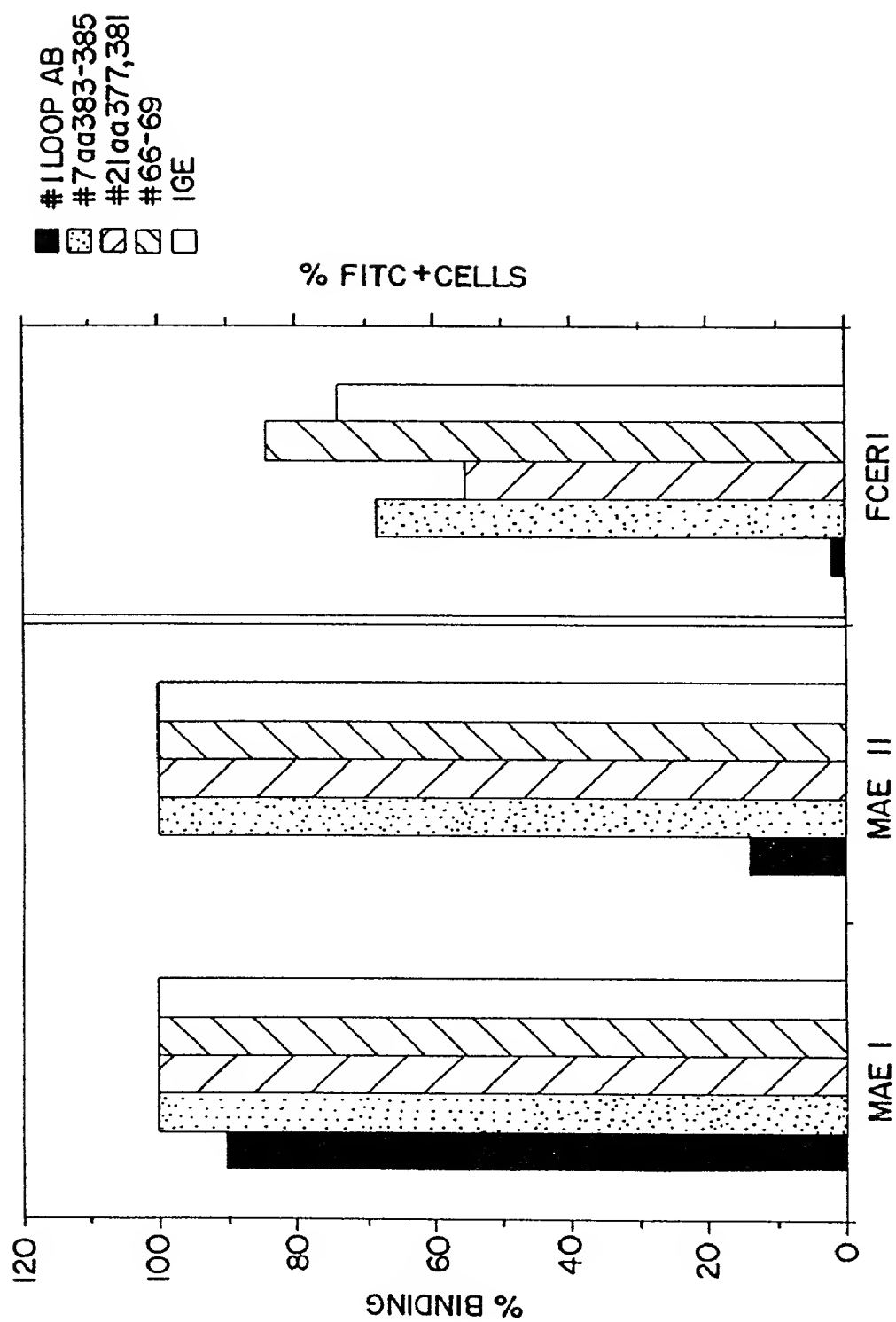


FIG.5c